Recombinant Human CALR Protein(Trx Tag)

Catalog Number: PDEH100659

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

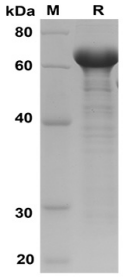
Description

Species	Human
Source	E.coli-derived Human CALR protein Glu18-Leu417, with an N-terminal Trx
Calculated MW	64.0 kDa
Observed MW	65 kDa
Accession	P27797
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human CALR proteins, 2μg/lane of Recombinant Human CALR proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 65 KD

Background

Calreticulin is a multifunctional protein. It acts as a main Ca(2+)-binding (storage) protein in the lumen of the endoplasmic reticulum. Calreticulin binds Ca2+ ions (a second messenger in signal transduction), rendering it inactive. The Ca2+ is bound with low affinity, but high capacity, and can be released on a signal. Located in storage compartments associated with the endoplasmic reticulum, calreticulin also binds to misfolded proteins and prevents them from being exported from the endoplasmic reticulum to the golgi apparatus. The amino terminus of calreticulin interacts with the DNA-binding domain of the glucocorticoid receptor and prevents the receptor from binding to its specific glucocorticoid response element. Calreticulin reduces the binding of androgen receptor to its hormone-responsive DNA element and inhibits androgen receptor and retinoic acid receptor transcriptional activities in vivo, as well as retinoic acid-induced neuronal differentiation. Therefore, calreticulin acts as a significant modulator of the regulation of gene transcription by nuclear hormone receptors.